

Warm Up: Set up a proportion to find x

1. One hour and 10 mins is X sec.

2. 15 seconds is X mins.

3. 4.5 meters per second is X centimeters per second.

4. If 16 oz. = 1 pound and your backpack weighs 344 oz ,
that is X pounds.

5. If you run 30 feet in 1.6 seconds, you are running at
 X miles per hour

③ 4.5 meters per second

$$\frac{4.5 \text{ meters}}{1 \text{ second}} \times \frac{100 \text{ cent}}{1 \text{ meter}} = \frac{450 \text{ centimeters}}{\text{second}}$$

$$\frac{17 \text{ feet}}{1 \text{ sec.}} \times \frac{12 \text{ inches}}{1 \text{ foot}} = \frac{204 \text{ inches}}{\text{sec}}$$

$$\begin{array}{r} 1602 = 116 \\ \hline 1602 \times 16 \\ \hline 34402 \end{array}$$

$$\begin{array}{r} 1602 (x 16) = 16 \cdot 34402 \\ \hline 1602 \\ \hline x 16 = 21,516 \end{array}$$

1. One hour & 10 min = X sec

$$\frac{60 \text{ sec}}{1 \text{ min}} \quad \frac{60 \text{ min}}{1 \text{ hour}} \times 3600 \text{ sec}$$

$$10 \text{ min} \quad \frac{60 \text{ sec}}{1 \text{ min}} = \frac{600 \text{ sec}}{4200 \text{ sec}}$$

$$\frac{30 \text{ feet}}{1.6 \text{ sec}} \times \frac{60 \text{ sec}}{1 \text{ min}} = \frac{1800 \text{ feet}}{1.6 \text{ min}}$$

$$\frac{1800 \text{ feet}}{1.6 \text{ min}} \times \frac{60 \text{ min}}{1 \text{ hour}} = \frac{108,000 \text{ feet}}{1.6 \text{ hour}}$$

$$\frac{5,280 \text{ feet}}{1 \text{ mile}}$$

$$\frac{108,000 \text{ feet}}{1.6 \text{ hour}} \times \frac{1 \text{ mile}}{5,280 \text{ feet}} = \frac{108,000 \text{ miles}}{2,448 \text{ hours}}$$

$$2. \quad 15 \text{ sec}^{\text{15}} = x \text{ min}$$

$$= .25 \text{ min}$$

$$\frac{1 \text{ min}}{60 \text{ sec}} \quad \frac{15}{60} = \frac{1}{4} = .25 \text{ min}$$

Investigation: Converting centimeters to Inches

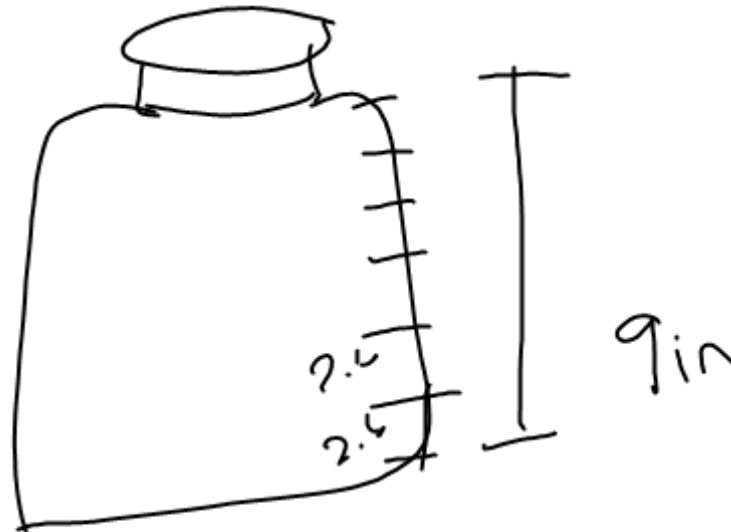
1. As a group, measure 4 objects in centimeters and in inches. (one object per person)
2. Record your data on a table, like the one below.
3. Find the ratios for each object in centimeters to inches and it's decimal equivalent, using a calculator.
4. How do your ratios differ from object to object? Is there one very different than the others? Pick one ratio that is representative of your findings.
5. In a complete sentence, what does your decimal solution represent?

object	inches	centimeters	cent/inch	decimal equivalent
			27.8/10.5	2.6

$$\frac{27.8 \text{ cent.}}{10.5 \text{ inches}} = \left(\frac{2.6 \text{ cent.}}{\text{inch}} \right)$$

water - 9 in

$$9 \text{ in} \times \frac{2.6 \text{ cm}}{\text{inch}}$$



Room is 12 meter

How many centimeter is that equal to

100 centimeters in 1 meter

39 inches in 1 meter
How many feet?

$$12 \times 3 = 36$$

3in = $\frac{1}{4}$ of 1 foot

$$36 + 3 = 39$$

3.25

$$\frac{12 \text{ in}}{1 \text{ foot}} \times 3 \text{ feet} = 36 \text{ inches}$$

$$39 \text{ in} - 36 \text{ in} = 3 \text{ inches}$$

$$\frac{12 \text{ inches}}{1 \text{ foot}}$$

$$3 \text{ inches} \times \frac{1 \text{ foot} = 4}{12 \text{ inches}}$$